REJECTIONS UNDER 35 U.S.C. 103

Claims 1, 5, and 9 stand rejected as unpatentable over Tetsuya in view of Takashi. Claim 2 is rejected as unpatentable over Tetsuya and Takashi further in view of Lee. Claim 4 is rejected as unpatentable over Tetsuya and Takashi further in view of Ofer. Claim 7 is rejected as unpatentable over Tetsuya and Takashi further in view of Ofer.

In response, Applicants have canceled claims 2-6 and amended claims 1, 7, and 9 herein. Claims 1 and 9 differ essentially only in form, and the limitation of objected-to claim 6 is now applied to claim 9, which is believed to render claim 9 allowable. Claim 1 is amended to include the limitations of claim 3. Claim 7 is amended to make it independent.

All pending claims are believed to be allowable as amended. The Examiner is invited to call Applicants' undersigned representative if a telephone conference will expedite the prosecution of this application.

Respectfully submitted,

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Marked-up version of amended claims:

1. (Currently Amended) A method for encoding and decoding blocks having a predetermined number of sectors of data bytes to detect and correct data bytes in error in each sector of a block, the method comprising the steps of:

(a) generating sector level check bytes for each sector in the block responsive to the data bytes in each sector according to a first level of an error correction code, and except when the write command is fragmented and is less than or equal to one multi-sector block of data bytes, generating block level check bytes for at least one sector in the block responsive to the sector level check bytes of at least two sectors, including the at least one sector, according to at least a second level of the error correction code; and

(b) processing the block to detect and correct data bytes in error in each sector within the capability of the sector level check bytes, to detect and correct data bytes in error in the at least two sectors that exceed the correction capability of the sector level check bytes but within the correction capability of the block level check bytes, or to indicate that the data bytes in error in the at least two sectors exceed the correction capability of each of the sector level check bytes and the block level check bytes.

7. (Currently Amended) A method for encoding and decoding blocks having a predetermined number of sectors of data bytes to detect and correct data bytes in error in each sector of a block, the method comprising the steps of:

(a) generating sector level check bytes for each sector in the block responsive to the data bytes in each sector according to a first level of an error correction code, and

generating block level check bytes for at least one sector in the block responsive to the sector level check bytes of at least two sectors, including the at least one sector, according to at least a second level of the error correction code; and

(b) processing the block to detect and correct data bytes in error in each sector within the capability of the sector level check bytes, to detect and correct data bytes in error in the at least two sectors that exceed the correction capability of the sector level check bytes but within the correction capability of the block level check bytes, or to indicate that the data bytes in error in the at least two sectors exceed the correction capability of each of the sector level check bytes and the block level check bytes;

~~The method according to claim 1 further comprising the step of:~~

(c) receiving logical block addresses (LBAs) from a host operating system for each write/read command, wherein the LBAs are translated into physical locations within blocks located on a track of a moving storage medium of a data storage device;

(d) controlling the step of generating when writing data bytes responsive to the LBAs; and

(e) controlling the step of processing when reading data bytes responsive to the LBAs.

9. (Currently Amended) In a data storage device, an apparatus for encoding and decoding blocks having a predetermined number of sectors of data bytes to detect and correct data bytes in error in each sector of a block, the apparatus comprises:

(a) an encoder for generating sector level check bytes for each sector in the block responsive to the data bytes in each sector according to a first level of an error correction code, and generating block level check bytes for at least one sector in the block responsive

to the sector level check bytes of at least two <u>adjacent</u> sectors, including the at least

one sector, according to at least a second level of the error correction code; and

(b) a decoder for processing the block to detect and correct data bytes in each sector within

the capability of the sector level check bytes, to detect and correct data bytes in error

in the at least two <u>adjacent</u> sectors that exceed the correction capability of the sector

level check bytes but within the correction capability of the block level check bytes,

or to indicate that the data bytes in error in the at least two <u>adjacent</u> sectors exceed

the correction capability of each of the sector level check bytes and the block level

check bytes.